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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/789,139	02/27/2004	Kevin P. Connors	ALTU-1110	9270

28584 7590 03/20/2006

STALLMAN & POLLOCK LLP
353 SACRAMENTO STREET
SUITE 2200
SAN FRANCISCO, CA 94111

EXAMINER	
JOHNSON III, HENRY M	
ART UNIT	**PAPER NUMBER**
3739	

DATE MAILED: 03/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/789,139	CONNORS ET AL.	
	Examiner	Art Unit	
	Henry M. Johnson, III	3739	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 February 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *15-17,19-24,26,33,34 and 36-41* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *15-17,19-24,26,33,34 and 36-41* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *02 August 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Response to Arguments

Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection. The cooling of tissue during radiation treatment is well known as id a means for indicating completion of a process.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 15-17, 19-24, 26, 33, 34, and 35-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Application Publication US 2004/0093042 to Altshuler et al. in view of U.S. Patent 6,120,497 to Anderson et al. and further in view of U.S. Patent 6,413,268 to Hartman. Altshuler et al. teach a method and apparatus for treating tissue (non-invasive wrinkle removal) in a region at depth by applying optical radiation thereto of a wavelength able to reach the depth of the region and of a selected relatively low power for a duration sufficient for the radiation to effect the desired treatment while concurrently cooling tissue above the

selected region to protect such tissue (abstract). The irradiation source (Fig. 1, # 1) may be a radiant lamp, a halogen lamp, an incandescent lamp, an arc lamp, a fluorescent lamp, a light emitting diode, a laser (including diode and fiber lasers), the sun or other suitable optical energy source (paragraph 0044). Cooling is provided by a contact plate (Fig. 1, # 8) and may be made out of a suitable heat transfer material, and also, where the plate contacts tissue, of a material having a good optical match with the tissue. Sapphire is an example of a suitable material for the plate. In some embodiments, contact plate may have a high degree of thermal conductivity, for example, to allow cooling of the surface of the tissue by cooling mechanism (paragraph 0050). The irradiation time may vary from approximately 2 seconds to approximately 2 hours (paragraph 0012). The treatment times overlap those claimed and one skilled in the art would use a time appropriate to achieve the desired temperature based on the operating parameters of the radiation source. Cooling may be applied concurrently with the irradiation or prior to irradiation (paragraph 0011). The cooling of the epidermal layer in conjunction with irradiation inherently yields an inverted temperature gradient. Sensors or other monitoring devices may also be embedded in cooling mechanism, for example, to monitor the temperature, or determine the degree of cooling required by tissue, and be manually or electronically controlled (paragraph 0051). This is interpreted as capable of providing a visual indication of cooling. Altshuler et al. teach an irradiation wavelength of from 1050 to 1250 nanometers (paragraph 0010), which is well known to penetrate tissue from about 2-5 millimeters. A filter (Fig. 1, # 3) is included for wavelength selection. Altshuler et al. do not disclose the specific temperature at which collagen shrinks. Anderson et al. teach a method for treating wrinkles with radiation at depths from 100 microns to 1.2 millimeters (overlaps claim depth) using laser or incoherent radiation (abstract). Anderson et al. specifically disclose the known property of collagen to shrink at temperatures from 60°C to 70°C. While neither Altshuler et al. nor Anderson et al. teach cooling the tissue

following irradiation, both teach the importance of cooling to avoid damage to peripheral areas and it is considered obvious that one skilled in the art would continue cooling to limit such damage. U.S. Patent 5,885,274 to Fullmer et al. as cited in a prior office action and later herein, substantiates the obviousness of such cooling. Neither Altshuler et al. nor Anderson et al. teach an indication of a process completion. Hartman discloses an apparatus for skin treatment with light that includes a microprocessor for control that provides an audible and visual indication of completion of the treatment cycle (Col. 8, lines 36-42). It would have been obvious to one skilled in the art to use an indication of completion as taught by Hartman and the temperatures as taught by Anderson et al. in the method of Altshuler et al. as all are known in the art and one of skill in the art would obviously look to like art additions and enhancements to a treatment method.

Claim 40 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Application Publication US 2004/0093042 to Altshuler et al. in view of U.S. Patent 6,120,497 to Anderson et al. in view of U.S. Patent 6,413,268 to Hartman as applied to claim 15 above and further in view of U.S. Patent 5,885,274 to Fullmer et al. Altshuler et al., Anderson et al. and Hartman are discussed above, but do not teach the importance of the temperature of the filament. Fullmer et al. disclose a filament lamp for use in dermatological treatments including the use of a simmer voltage to maintain the temperature of the filament to allow faster rise time of the light pulses and to enhance the short pulses by the filament being in a warm condition (Col. 7, lines 42-45). It would have been obvious to one skilled in the art to use the filament techniques as taught by Fullmer et al. in the method of Altshuler et al. in view of Anderson et al. in view of Hartman to improve the efficiency of the light source as suggested by Fullmer et al.

Claim 41 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Application Publication US 2004/0093042 to Altshuler et al. in view of U.S. Patent 6,120,497 to

Anderson et al. in view of U.S. Patent Application Publication US 2005/0107850 to Vaynberg et al. Altshuler et al., Anderson et al. and Hartman are discussed above, but do not teach control of the light source using detected light from the source. Vaynberg et al. disclose a method and system for skin rejuvenation by heating collagen (paragraph 0037) using light from a non-coherent source. The light source is controlled using a light sensor (Fig. 1, # 135) that provides feedback to a controller (Fig. 1, # 130) to alter the pulse parameters (Paragraph 0018). It would have been obvious to one skilled in the art to use the optical feedback as taught by Vaynberg et al. in the method of Altshuler et al. in view of Anderson et al. in view of Hartman to provide positive control of the treatment parameters.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent 6,402,739 to Neev teaches cooling of tissue after radiation.

U.S. Patents 6,745,078, 6,338,731, 5,807,393 and U.S. Patent Application Publication US 2003/0036751 disclose devices with a signal to indicate completion of a process.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Henry M. Johnson, III whose telephone number is (571) 272-4768. The examiner can normally be reached on Monday through Friday from 6:00 AM to 3:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Linda C. Dvorak can be reached on (571) 272-4764. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Henry M. Johnson, III
Primary Examiner
Art Unit 3739